



**NOAA
FISHERIES**

Science Update

Marine Fisheries Advisory Committee Meeting
November 3rd, 2016

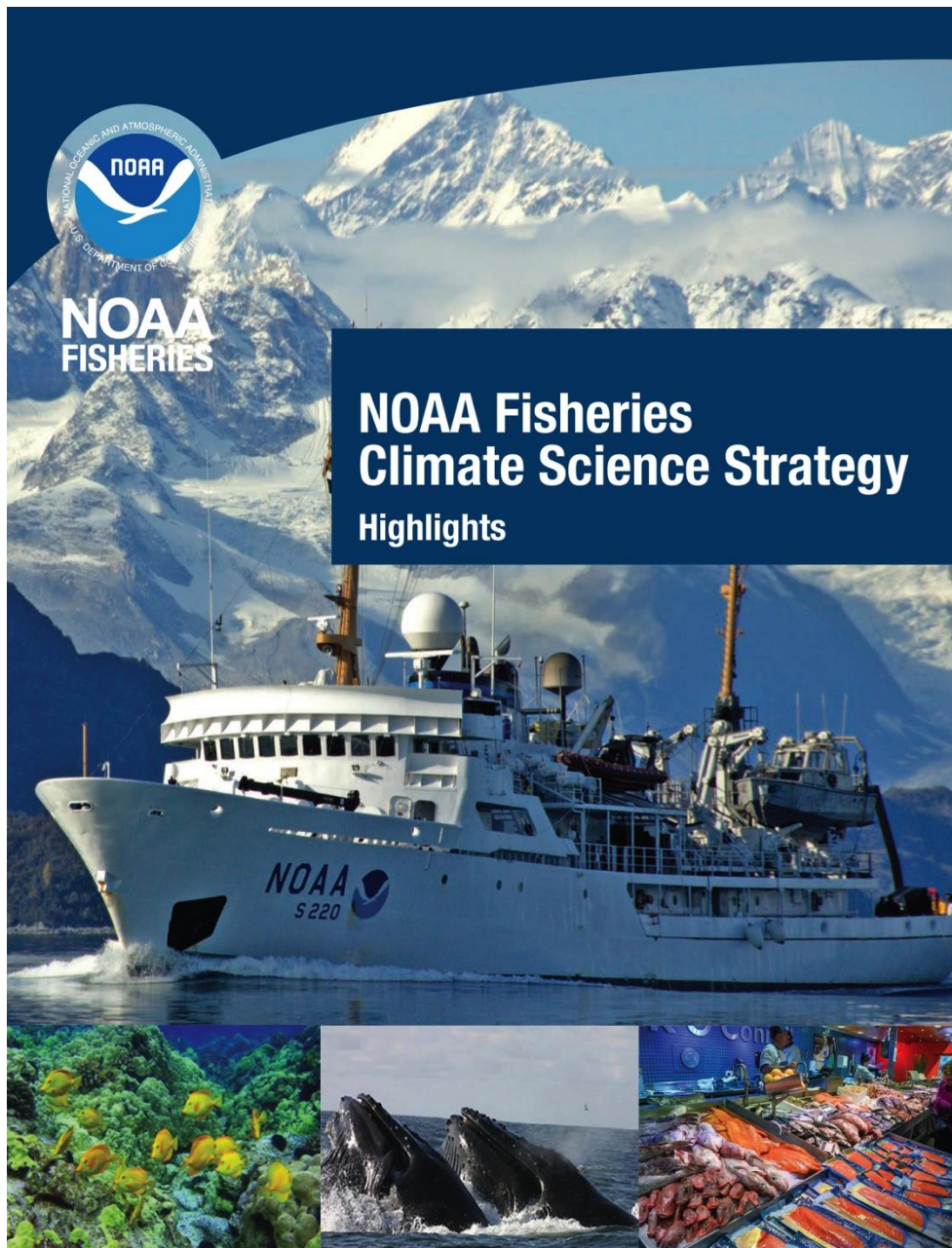
Dr. Richard Merrick, Director, NOAA Fisheries Scientific Programs



NOAA FISHERIES

Updates

- NMFS Climate Science Strategy - Regional Action Plans
- GAO Report - addressing climate change in fisheries management
- Transition to new MRIP Effort Survey
- Stock Assessment Improvement Plan



Goal:
Increase the
production, delivery
and use of climate-
related information
to fulfill
NOAA Fisheries
mandates

Purpose of RAPs:

- **Identify key actions** to implement the NMFS Climate Science Strategy in each region over the next 5 years.
- **Build awareness, support and partnerships** to help meet core needs.

Priority Actions In All RAPs:

- Complete Climate Vulnerability Assessments (fish stocks, protected species, fishing communities)
- Improve tracking and reporting on ecosystem conditions (e.g., Ecosystem Status Reports)
- Targeted research to understand sensitivities to change
- Improve forecasts of exposure to change
- Evaluate future scenarios and management strategies

Status:

- RAPs completed in all 5 regions (NE, Gulf of Mexico, South Atlantic, West Coast, Bering and Pacific Islands)
- RAP actions included in Centers' FY17 work plans
- Public release planned for December 2016

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September 2016

FEDERAL FISHERIES MANAGEMENT

Additional Actions
Could Advance Efforts
to Incorporate Climate
Information into
Management
Decisions

September 2016

GAO-16-827

Purpose:

**Review federal efforts
to address
the effects of climate
change
on federal fisheries
management.**



GAO Report – Key Findings

1. ***Climate change could significantly affect*** the abundance and distribution of federally-managed fisheries.
2. ***These changes may pose risks*** to fisheries-dependent communities and industries.
3. ***NMFS and Fishery Management Councils*** have limited climate-related information for use in fishery management.
4. ***Better information is required*** on the magnitude and timing of climate-related effects to address these risks.
5. ***NOAA Fisheries is taking action*** to address information needs through the NOAA Fisheries Climate Science Strategy and Regional Action Plans.

GAO Report – Recommendations

To help incorporate climate information into fisheries management and manage climate-related risks, the report recommends:

1. ***Develop guidance on how to incorporate climate information*** into the fisheries management process.
2. ***Finalize the Climate Science Strategy Regional Action Plans*** and include performance measures to track achievement of the Strategy's Objectives.

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FES Transition Timeline At-A-Glance

Step 1

2015-2017

- Benchmark new mail survey against current phone survey

Step 2

by Mar 2017

- Develop and peer review calibration model

Step 3

by Jun 2017

- Re-estimate historical catches

Step 4

by Oct 2017

- Incorporate new estimates into updated assessments for key stocks

Step 5

by Jan 2018

- Incorporate new estimates and ACLs into management actions

Three-year transition period

Phone survey estimates used for science and management until 2018

Plan developed with extensive regional, state, and federal input

One-Year Progress Report (Released Oct. 31st)

- NOAA Fisheries assessed preliminary results of the new mail survey to determine if it is performing as expected.
- Results from the first full year of benchmarking are similar to what we saw in 2012-2013 pilot studies:
 - The mail survey estimate of total shore fishing effort is 6.2 times larger than the phone survey estimate;
 - The mail survey estimate of total private boat fishing effort is 3.3 times larger than the phone survey estimate; and
 - Side-by-side comparisons of the surveys will continue through December 2017.



Hypothetical Calibration Scenarios Report

(Released Oct. 31st)

- Tested effects of revised catch histories on the performance of current models for key stocks planned for 2017 assessment updates.
- Sought to determine if current assessment models could accommodate the changes in catch histories.
- Final results indicated current assessment models are able to handle the broad range of possible changes in the catch histories.

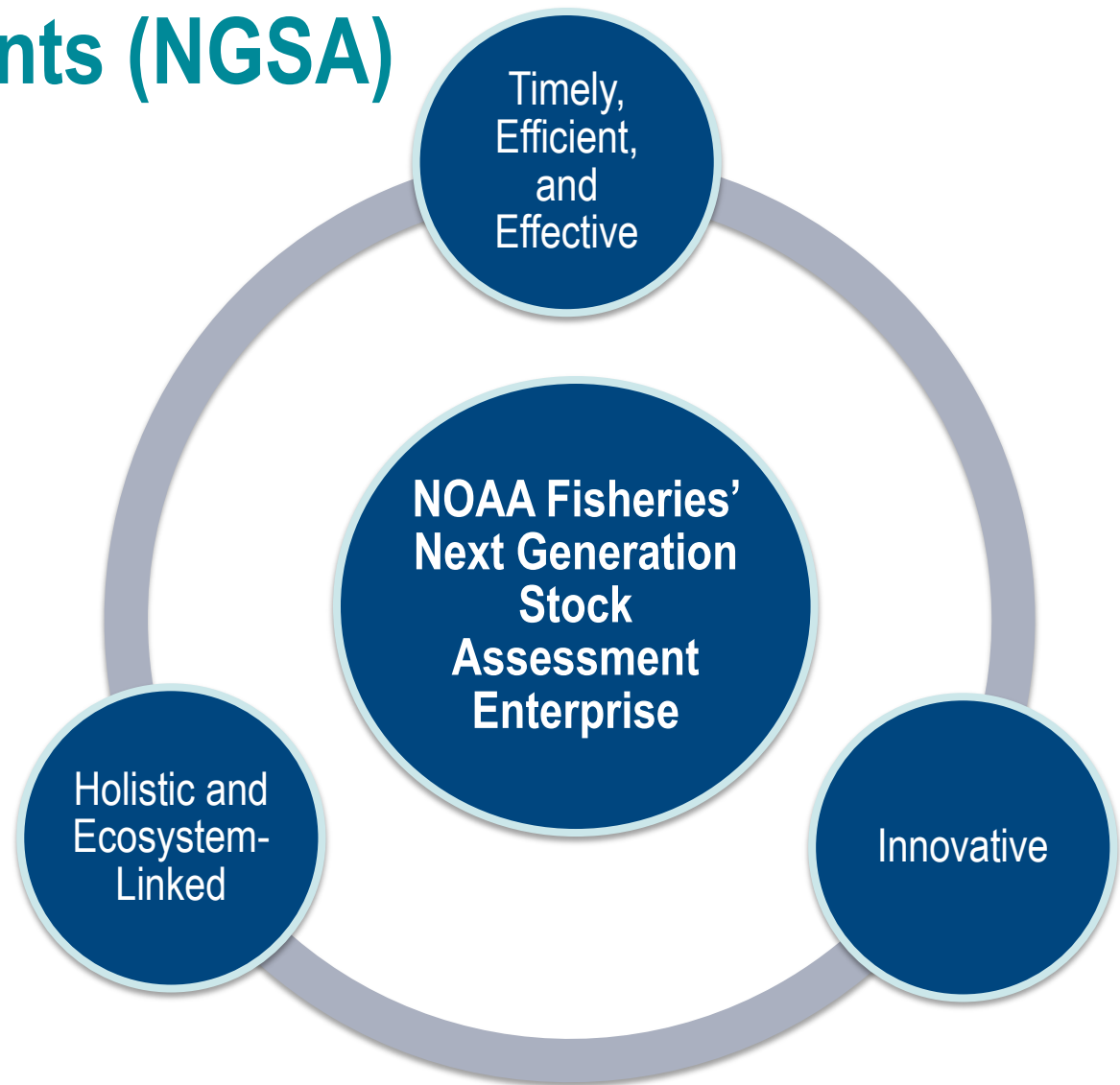


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Moving out on the Next Generation of Stock Assessments (NGSA)



NGSA will be Ecosystem Linked

- Ecosystem and socioeconomic drivers
 - Consider in all assessments, more routine incorporation in some, guided by prioritization
- Better coordination between assessments, FEPs, economists, ecosystem programs
- More decision analyses (MSEs) with economics and ecology



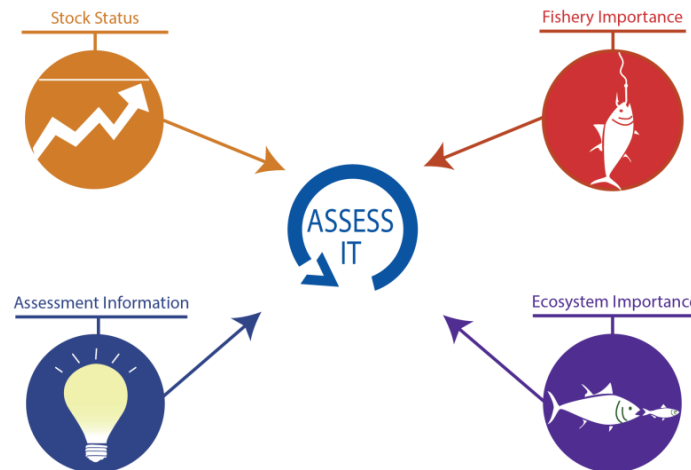
NGSA includes Scientific Innovations

- Optimize surveys and utilize AST
 - Calibration/absolute abundance; spp dist.; complex habitats; new types of data
- Fishery-dependent (optimize observers, EM/ER)
- Better data delivery
- Improved models and statistics



NGSA will be Timely, Efficient and Effective

- Use new categorization system and prioritization protocol to help plan assessments/conduct gap analyses
- Facilitate standardized models yet maintain R&D
- Tailored peer review and focused TOR
- Improved communication and stakeholder engagement



Timeline

- Complete NMFS draft – 2016
- Present to CCC – Feb 2017
 - Solicit Council/SSC comments & edits
 - Incorporate comments/edits
- Publish – Summer 2017
- Begin implementation...



Thank You
Questions?

